

## REMARKS

The present amendment is in response to the Office Action dated January 5, 2006, wherein the Examiner has rejected claims 1-8 and 26-58. By the present amendment claims 1, 26 and 34 have been amended and none of the claims have been canceled. Accordingly, claims 1-8 and 26-58 are pending in the present application. Reconsideration and allowance of pending claims 1-8 and 26-58 in view of the amendments and the following remarks are respectfully requested.

### **Claim Rejections Under §103:**

Paragraph 7 of the Office Action rejects claims 1, 6-7, 45, and 48-52 under 35 U.S.C. 103(a) as being obvious in view of Anderson (U.S. Pub. 2003/0008731) in further view of Gobush (U.S. 6,758,759). Applicants respectfully traverse the rejection because Anderson and Gobush, alone or in combination, fail to teach, suggest, or disclose all elements of the claims for at least the reasons described below.

Accordingly, the Office Action fails to make out a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).” (See MPEP §706.02(j)).

In this instance, the references fail to teach, suggest, or disclose each and every claim limitation. The Office Action admits that Anderson does not teach the limitation in claim 1 of using data and information to optimize launch angle, velocity, and spin rate. Accordingly, the Action must rely on Gobush to make up for the deficiencies of Anderson, which it does not.

Certain embodiments of the present invention include the limitation of optimizing launch angle, velocity, and spin rate to maximize distance. Accordingly, claim 1 recites “deriving swing parameters for use in fitting [a] golfer with golf equipment, including optimizing a launch angle, velocity and spin rate based on...derived swing parameters....”

As the present application states, “in order to maximize driver distance one needs to match the golfer’s ball speed (velocity) with an optimized combination of launch angle and spin rate.” (See Par. 054). Previously, velocity was thought to be the key to achieving maximum distance; however, as taught in the present application, maximum distance can really only be achieved by optimizing the combination of launch angle, velocity, and spin rate.

As recognized in the Action, Anderson fails to teach, suggest, or disclose data and information to optimize launch angle, velocity, and spin rate. In contrast to the position taken by the Action, Gobush also fails to teach, suggest, or disclose optimizing launch angle, velocity, and spin rate to maximize distance. Specifically, Gobush does not teach optimizing all three parameters, launch angle, velocity, *and* spin rate relative to each other to achieve the advantages discussed in the present application and claimed in claim 1.

Gobush teaches that data can be determined for “at least one of the following: [ten different items]” that can be measured to determine ball motion. (See col. 2, lns. 22-26). Nothing in Gobush teaches which, if any, of the ten different measurements can or should be

optimized in order to maximize driver distance as taught in the present application and claimed in claim 1. Further, nothing in Gobush teaches, suggests, or discloses that one or more of these ten different items should be optimized relative to each other. Thus, nothing in Gobush teaches “optimizing launch angle, velocity, *and* spin rate to maximize distance.”

Because the Office Action fails to make a *prima facie* case of obviousness, Applicant respectfully request that the rejection be withdrawn as to claims 1. Claims 6-7, 45, 48-52 ultimately depend from claim 1 and are allowable for at least the reasons discussed above with respect to claim 1. Applicant therefore, respectfully requests that the rejection as to claims 6-7, 45, 48-52 be withdrawn.

Paragraph 8 of the Office Action rejects claims 2-5, 8, and 46 under 35 U.S.C. 103(a) as being obvious in view of Anderson and Gobush in further view of Hammond (U.S. 3,945,646) and Naruo (U.S. 5,821,417). Claims 2-5, 8, and 46 ultimately depend from claim 1 and are allowable for at least the reasons discussed above with respect to claim 1, unless Hammond and Naruo make up for the deficiencies of Anderson and Gobush, which they do not. Applicant therefore, respectfully requests that the rejection as to claims 2-5, 8, and 46 be withdrawn.

Paragraph 9 of the Office Action rejects claim 41 under 35 U.S.C. 103(a) as being obvious in view of Anderson and Gobush in further view of Nauck (U.S. 5,616,832). Claim 41 ultimately depends from claim 1 and is allowable for at least the reasons discussed above with respect to claim 1, unless Nauck makes up for the deficiencies of Anderson and Gobush, which it does not. Applicant therefore, respectfully requests that the rejection as to claim 41 be withdrawn.

Paragraph 10 of the Office Action rejects claim 42 under 35 U.S.C. 103(a) as being obvious in view of Anderson and Gobush in further view of Sayers (U.S. 4,059,270). Claim 42 ultimately depends from claim 1 and is allowable for at least the reasons discussed above with respect to claim 1, unless Sayers makes up for the deficiencies of Anderson and Gobush, which it does not. Applicant therefore, respectfully requests that the rejection as to claim 42 be withdrawn.

Paragraph 11 of the Office Action rejects claim 43 under 35 U.S.C. 103(a) as being obvious in view of Anderson and Gobush in further view of Antonious (U.S. 5,916,041). Claim 43 ultimately depends from claim 1 and is allowable for at least the reasons discussed above with respect to claim 1, unless Antonious makes up for the deficiencies of Anderson and Gobush, which it does not. Applicant therefore, respectfully requests that the rejection as to claim 43 be withdrawn.

Paragraph 12 of the Office Action rejects claim 44 under 35 U.S.C. 103(a) as being obvious in view of Anderson and Gobush in further view of Mann (U.S. 3,963,236). Claim 44 ultimately depends from claim 1 and is allowable for at least the reasons discussed above with respect to claim 1, unless Mann makes up for the deficiencies of Anderson and Gobush, which it does not. Applicant therefore, respectfully requests that the rejection as to claim 44 be withdrawn.

Paragraph 13 of the Office Action rejects claim 47 under 35 U.S.C. 103(a) as being obvious in view of Anderson and Gobush in further view of Cervantes (U.S. 5,779,566). Claim 47 ultimately depends from claim 1 and is allowable for at least the reasons discussed above with respect to claim 1, unless Cervantes makes up for the deficiencies of Anderson and Gobush,

which it does not. Applicant therefore, respectfully requests that the rejection as to claim 47 be withdrawn.

Paragraph 14 of the Office Action rejects claims 26-32, 35, 37-38, 40, and 53-58 under 35 U.S.C. 103(a) as being obvious in view of Anderson in further view of Gobush, Hammond, and Naruo in further view of Karasavas (U.S. 5,133,556). Applicants respectfully traverse the rejection because Anderson, Gobush, Naruo, Karasavas and Kawaguchi, alone or in combination, fail to teach, suggest, or disclose all elements of the claims for at least the reasons described below.

Claim 26 is directed to a golf equipment fitting system that performs similar functionality as the method of claim 1. Claim 26 is, therefore, allowable for substantially the same reasons as claim 1. Applicant therefore, respectfully requests that the rejection as to claim 26 be withdrawn.

Claim 26 is allowable for the additional reason that Gobush does not teach, suggest, or disclose obtaining information related to the launch of a golf ball based on color markings on the golf ball comprising at least two colors.

Certain embodiments of the present invention are directed to systems and methods for fitting golf equipment, including marking a golf ball with at least two colors and using a high speed color camera to obtain images of the golf ball after impact by the golf club. The images can then be used to obtain launch data, such as spin rate and direction. By using color high-speed cameras and a golf ball with at least two color markings more accurate and more reliable launch data can be obtained as compared to conventional systems that typically use black and white high speed cameras. (See paragraph 072). Further, as described below, by using color

markers less data is needed relative to the system of Gobush because fewer markers can be used in the present system.

Accordingly, claim 26 recites a golf equipment fitting system, comprising “a launch data collection system, comprising a high speed color camera system configured to obtain information related to launch of a golf ball based on color markings on the golf ball, the color markings comprising *at least two colors*.”

Thus, as claimed in claim 26, multiple colors are used on the golf ball at the same time. Gobush fails to teach, suggest, or disclose such subject matter. As the Action states, the Gobush reference teaches using different color markers between a club and a ball. (See Gobush, col. 19, lns. 37-50). Contrary to the position taken by the Action, however, Gobush does not teach using at least two different color markers on a golf ball.

Gobush, teaches using only *one* color for any given golf ball stating that when using colored markers, the club cameras can include filters of a different color from filters on the ball camera so that the club camera records images of the markers on the club and the ball and the ball camera records only images of markers on the ball. (See Gobush, col. 19, lns. 37-50). Thus, in Gobush, only a single color is used on the ball and a single color is used on the club.

Further, in Gobush the color markings are only used to differentiate between a golf ball and a golf club, not to improve the accuracy of the measurements of the golf ball. Thus, Gobush does not teach “color markings on the golf ball, the color markings comprising at least two colors” to achieve the advantages discussed in the present application as claimed in claim 26.

Even if Gobush teaches using more than one color on a golf ball at the same time, which it does not, Gobush does not process the markings of two different colors. Thus, nothing in Gobush teaches what one would do with the data provided by using multiple colors on the golf ball, as in the present application and claims. On the contrary, Gobush teaches that the colored markings simply allow the ball to be processed separately from the club, stating that “the club image has club and ball markers and the ball image has only ball markers” (See Gobush, col. 19, lns. 48-50).

In the system as described and claimed in the present application, accurate data can be achieved with as few as two markings, one of each color. While Gobush teaches that as few as two markers can be used on a golf ball, Gobush actually teaches away from the present invention because it teaches that in order to obtain highly accurate data, as many as eleven markings are needed and the markers must have defined angles and relations. (See Gobush, col. 6, lns. 3-8). As the present application states with respect to a black and white camera systems, “markings may not be as easily discernable, thus rendering the information gathering in conventional systems less accurate” (See Paragraph 073). Because Gobush does not differentiate between different colors on a golf ball, Gobush is effectively a monochrome system with respect to monitoring the golf ball. Because Gobush is effectively a monochrome system, Gobush has the same shortcomings as a black and white system, especially when fewer, e.g., two, markings are used on the golf ball. The Gobush system is effectively monochromatic with respect to the ball and the ball camera because the markings on the ball are all the same color. Even if multiple color markings were used on the golf ball the Gobush system is still effectively monochromatic with respect to the ball and the ball camera because the Gobush system does not process multiple

colors on the golf ball. Colored markings are only used to differentiate between the ball and the club. Therefore, Gobush is effectively the same as a black and white system in this respect.

Gobush cannot, therefore, anticipate claim 26 because claim 26 requires “a launch data collection system, comprising a high speed color camera system configured to obtain information related to launch of a golf ball based on color markings on the golf ball, the color markings comprising *at least two colors*.”

Claims 27-32, 35, 37-38, 40, and 53-58 ultimately depend from claim 26 and are allowable for at least the reasons discussed above with respect to claim 26. Applicant therefore, respectfully requests that the rejection as to claims 27-32, 35, 37-38, 40, and 53-58 be withdrawn.

Paragraph 15 of the Office Action rejects claims 33-34 under 35 U.S.C. 103(a) as being obvious in view of Anderson in further view of Gobush, Hammond, Naruo, and Karasavas in further view of Kawaguchi (U.S. 6,213,888). Claims 33-34 ultimately depend from claim 26 and are allowable for at least the reasons discussed above with respect to claim 26, unless Kawaguchi, Naruo, and Karasavas make up for the deficiencies of Anderson and Gobush, which they do not. Applicant therefore, respectfully requests that the rejection as to claims 33-34 be withdrawn.

Paragraph 16 of the Office Action rejects claims 36 and 39 under 35 U.S.C. 103(a) as being obvious in view of Anderson in further view of Gobush, Hammond, Naruo, and Karasavas in further view of Evans (U.S. 3,717,857). Claims 36 and 39 ultimately depend from claim 26 and are allowable for at least the reasons discussed above with respect to claim 26, unless Evans, Naruo, Karasavas, and Kawaguchi make up for the deficiencies of Anderson and Gobush, which



they do not. Applicant therefore, respectfully requests that the rejection as to claims 36 and 39 be withdrawn.

**CONCLUSION**

No additional fees are deemed to be due, however, the Commissioner is hereby authorized to charge any additional fee and/or credit any overpayment to Deposit Account Number 13-0480.

Respectfully submitted,

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